





OBSERVATIONS
ON
C H O L E R A,

AS IT APPEARED

AT PORT-GLASGOW,

DURING THE MONTHS OF JULY AND AUGUST, 1831.

ILLUSTRATED BY NUMEROUS CASES.

BY

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OBSERVATIONS, &c.

FOR an author voluntarily to come before the public, and then entreat its lenity to the faults or failures of what he presents to it, is, in general, of very doubtful propriety. But my case is particular in as much as I have not sought publicity ; it has been suddenly forced upon me, as a measure which self-defence imperatively demanded.

Having been called to attend cases of cholera differing in some prominent symptoms from any I had formerly met with in this country, I felt it to be my duty, agreeably to his majesty's proclamation, to send communications respecting them to the privy council. (Appendix, No. I.) The members of that honourable body considered these communications of such importance, that they sent Dr. Daun to inquire minutely into the circumstances and report ; this gentleman was joined by

Dr. Badenach, at the desire of Sir William Pym, Superintendent-General of Quarantine. The former of these gentlemen assured me, he would not have considered me "justified in withholding these cases, and the facts connected with them, from the knowledge of government at the present juncture."

On the first of August, an anonymous attack upon my character and conduct in the treatment of the following cases, was inserted in the Glasgow Herald; (Appendix, No. II.) in which I was ridiculed and reflected on, as having, by my communications with the privy council and board of health, given rise to unnecessary alarm; asserting that it arose from ignorance and carelessness on my part; and that the disease complained of was neither more nor less than the cholera which annually prevails in this country; and concludes with assuring the editor, upon the authority of "Drs. Daun and Badenach, who had both seen much of the disease in India, that no case resembling Indian Cholera had as yet appeared at Port-Glasgow." The authority of the former gentleman to state such an opinion is unquestionable, provided he can reconcile it with his statement to me, as I have given above; but as to the latter individual, I shall, without fear of contradiction, assert, that during his short visit at Port-Glasgow, he neither examined a single case, nor read a single note of any of the cases which I had had under my care. I met him quite accidentally in Dr. Daun's apartments,

and was not ten minutes in his company.* Such is the nature of the treatment which has dragged me before the public ; and it will rest with it, and more particularly with my medical brethren, to decide, whether any thing in character approaching to the formidable disease usually denominated Indian Cholera, appeared in this country ; and whether I was justified in calling the attention of the authorities to the symptoms of the disease at that time prevailing in Port-Glasgow.

And who, (it may be asked,) is this authorized individual, this H. M. correspondent of the Glasgow Herald ? Most people, I suspect, will come

* The following is an extract from the London Courier of Saturday evening, the 30th July, bearing to be a quotation from a letter addressed by Dr. Daun to C. Greville, Esq. clerk to the council, and dated 27th July.

“ All the individuals who had been attacked with Cholera are now recovered, and have returned to their usual occupations, with the exception of five, who are still in a convalescent state. Those I visited in the course of the evening of yesterday, and from the information of the convalescents themselves, as well as from the notes of the cases taken by Dr. Marshall at the time, I can have no hesitation in stating it to be my decided opinion, that *all* the cases of Cholera which have come under that gentleman's observation here, have been cases of common Cholera Morbus of this country, and which is always more or less prevalent about this season of the year, and that the opinion of their having originated in contagion imported into this country from Russia, or that they are in their own nature contagious, is wholly groundless.”

In reference to the preceding extract, I think it right to mention that Dr. Daun only paid one visit to each of five cases, and heard me read part of my notes of other three cases, but did not examine a single note of the cases he visited. It requires little penetration to observe, on reading the following cases, that the writer of the above extract must either be an inattentive observer of the phenomena of disease, or must be deplorably ignorant of the Cholera as it usually appears in this country.

to the same conclusion I myself did on first perusing the paragraph, that it was the production of some dastardly poltroon, who wanted courage in any other way to vent the ranklings of *private malice*. Nothing, however, can be farther from the truth. It is Henry Marshall, Esq.; it is an officer of long standing, holding a high situation in the medical department of the army—it is a man distinguished for literary productions of a very different stamp, who thus stoops to lift his pen, without the slightest provocation, to undermine the moral and professional character of one who, in a season of great family affliction and distress, was labouring at the command of his Sovereign to maintain the security of his fellow-countrymen from pestilence. And let me add here, that until the paragraph appeared in the London paper, none in this part of the country had the most distant conception that a disease so frightful prevailed, neither would they, on such authority, believe it in this quarter. It was not until Mr. H. Marshall's letter appeared in the Glasgow Herald that the people generally were aware of the communications I had made to the privy council on the subject; and but for the unhappy insertion of the former, (by whom I know not,) and the uncharitable interference of the last-mentioned gentleman, they might still have remained in blissful ignorance of the danger which threatened them.

I should have been glad had I been afforded an

opportunity of withholding the names of the gentlemen I have introduced here, and whose conduct I have reported to the Privy Council and the Army Medical Board ; but since they have suffered their attack upon my character and conduct to remain unexpiated, I should be deficient in duty to myself and those interested in me, did I not tell "the whole truth," as I trust I have "nothing but the truth." The correspondence resulting from the publication of Mr. H. Marshall's letter I withhold, being altogether of a personal nature.

I am happy to say, that since the weather changed, this disease has, in a great measure, disappeared ; but those who are capable of forming an opinion on such matters, must judge for themselves how far there was ground for the charge of creating unnecessary alarm, when it is recollected, that twenty-three of the cases I have detailed, appeared, in my limited practice, in eighteen days.

These "cases" cannot be better prefaced than by the following quotations from Mr. Reginald Orton's excellent work on the Epidemic Cholera of India.

"It appears therefore," says Mr. Orton, vol. i. p. 32, "that there is no constant symptom on which to found a distinction between European and Indian Cholera ; for if we rest it on the occasional, or even usual absence of bile in the one, and abundance of it in the other, as well might we divide the epidemic into two diseases, on account of its producing violent spasms in the muscles of one subject, and none

at all, but on the contrary, extreme debility, approaching to paralysis in those of another. But these arguments are superfluous. It is sufficiently evident that Cholera Morbus, and the usual form of this epidemic, are but different degrees of the same disease, and that the former is the lesser, and the latter the greater. It will be useful to imagine a strongly marked case of each kind, occurring in similar habits, of the common strength and fullness; and both terminating favourably. The symptoms in which they will most remarkably differ, will be as follows:—

“Cholera Mitior.

| “Cholera Gravior.

General Character.

“Increased Action.

| “Diminished Action.

Particular Character.

“Excessive Secretion of Bile throughout.

“Entire suppression of Bile, until the favourable crisis.

“Violent spasms of the voluntary muscles.

“Slight spasms, or none.

“Moderate debility of the animal functions.

“Extreme debility of the animal functions.

“Full and strong pulse.

“Extremely weak pulse.

“Hot skin and flushed face.

“Cold skin and sunk in face.

“Violent and frequent retching, spasms in the intestines and purging.

“No spasms in the intestines, not more than one or two evacuations by vomit or stool.

“Such will be the appearances in the early stages of each case. If the disease is not quickly arrested, the increased actions will be superseded by those of

an opposite character ; consequently it will assume, in a great degree, the form of the second. On the occurrence of a favourable crisis also, the distinctions will in a great degree cease. In both there will be excessive secretion of bile, heat of skin, and the pulse above the natural standard, both in frequency and force."

Again, at page 101, Mr. Orton resumes the same subject. "It seems to be very evident that the Cholera of temperate climates is but a milder form or smaller degree of the Indian disease ; and we accordingly find that the former is marked by a highly increased action of the biliary organ, and the latter by a total cessation of its functions. It is an incontrovertible truth that those cases of the epidemic in which the increased actions predominate, as violent spasms and retching, quick and full pulse, hot skin, and particularly the flow of bile, are more tractable and less dangerous than those of an opposite description, in which there is little or no spasm or vomiting, and the suppression of nearly all the functions.

"The different periods of the disease are also marked by the predominance of one or other of these two classes of symptoms, which leads to the same conclusion. In the early stages, when the morbid affection exists in a moderate degree, the increased actions prevail,—spasms, vomiting, purging ; an increase of many of the secretions : as the disease advances to a fatal termination, they are also

superseded by the suppression of functions : If the event is fatal, the increased actions never re-appear ; but on the occurrence of a favourable crisis, when the degree of disease is again less, this class of affections, and particularly increase of secretions, again preponderates, as has already been shewn. It has likewise been shewn, that diminution or cessation of vital action, has chiefly prevailed when the great external cause appeared to be at its height, and that increased action has frequently formed the principal feature of the disease under other circumstances."

Dr. Daun repeatedly asserted in my presence, and not in my presence alone,—that "the Cholera of India is in all its characteristics completely and essentially different from the disease of this country," (alluding of course to what he saw here,) "which most unfortunately,—it was not easy to guess *why* or *how*,—had obtained the same name."

By what reasoning or fact this opinion is upheld I do not pretend to say, as I never heard either advanced in its support,—but I would ask,—Is there any advantage to accrue from our adopting it, in the face of both fact and analogy?

To me it appears, that by its adoption we have every thing to lose and nothing to gain.

We lose, as far as this country is concerned, the whole benefit of all the labour and learning so unsparingly expended, in the investigation of the disease, as it has appeared elsewhere.

Had I, for instance, adopted this opinion, and acted upon it in my very limited experience here, and instead of following, as I did, the ideas and advice of my predecessors in a wide field, gone on blundering upon the notion that I was treating a totally different, or a *new* disease,—is it not more than probable that the major part of my patients would have fallen victims to the prejudice and obstinacy of their physician?

I have heard two assertions brought forward by the antagonists of Mr. Orton's opinion; 1st, That "had the two diseases been one and the same, the number of deaths *must* have borne a much larger proportion to the recoveries, than they have done in this country." 2d, That "openly to promulgate such an opinion, is to spread an alarm throughout the population of Great Britain, which it is highly desirable to avoid."

These two observations may be answered together. In the records we have of the number of deaths from Cholera in India, the first fact which strikes us is the very small proportion of these occurring among Europeans; exposed though they were, to the same acting causes as the natives, but possessing constitutions of tenacity and vigour, which enabled them successfully to combat the enemy that made an easy victim of the feeble and effeminate Indian.

Again, let it be recollected that those deaths of Europeans, with few exceptions, took place in

crowded Barracks and Hospitals ;—not that I mean to insinuate that our soldiers did not meet with all attention their situation rendered possible ; but few I think will venture to assert it as improbable that many perished there, who might have survived, had their illness occurred amid the comforts of home, and the tenderly assiduous cares of numerous friends and relations. Is not this argument borne out by the very small number of deaths among the higher ranks in India ?

I am well aware that I shall here be told that the Russians are not in “crowded Barracks or Hospitals.” Most true,—but let any unprejudiced physician say, if it is possible to suppose a state of manners, habits, or modes of living, more perfectly adapted at once to render Cholera a most fatal, and a *most contagious disease*, than those of the filthy and gross-feeding Russian ! More than this,—there is every reason to believe, that the mortality in Russia has been immensely exaggerated : And if we are to judge of the state of medical science there, from the public confession made by some of its ornaments, that they mistook the first three or four cases of Cholera that came under their notice for inflammation of the bowels ; still less can we wonder at even its *reported* mortality.

Here, then, I ask, Whether is it best and wisest to tell the population of Great Britain, that “ *no case resembling Indian Cholera has ever appeared in this country,*” or candidly to acknowledge, that

cases *in every respect* resembling Indian Cholera, have appeared, not in one, two, or three, but in many parts of this country ; assuring them at the same time, that, under the influence of a climate differing in some respects from any it has yet traversed, affecting a people of different constitution, habits, and manners, from those of other countries ; and above all, amidst the charities of social and domestic life, as they are found in Great Britain, it is likely to prove a far less intractable and fatal malady than has ever appeared elsewhere ?

I hope no one will so far misunderstand what I have said, as to suppose I mean to assert, that the Cholera of India or Russia has been *epidemic* in Great Britain ; for nothing can be farther from the truth. All I contend for is, that Cholera has, during the present year, appeared at a season, and in a form, hitherto most uncommon, if not unknown in this country ; and, that wherever it has so appeared, cases, not always *insulated*, have occurred, bearing in every feature, except their fatality, the strongest resemblance to those detailed by Curtis, Annesley, Smith, Scott, and other writers on the diseases of India, and also to those described by Dr. Sokoloff at Orenburg ; and that therefore, come when it may as an epidemic, the public have no reason to look forward to its arrival as to that of a mysterious pestilence, *utterly unknown* to British constitutions and British physicians ; but as a disease, which has been already seen, grappled with, and, in all ordinary circumstances, subdued.

CHOLERA.

* This mark is affixed to the cases which were examined by Dr. Daun.

† This indicates those cases which occurred in the immediate neighbourhood of each other.

CASE FIRST.†

July 2, 1831.

JOHN MURRAY, ætat. 25, reported to be a healthy and remarkably temperate man, rather of a slender make and pale complexion, labourer in a sugar-house here; became rather unwell last evening, went to bed early, and about one this morning was seized with purging, accompanied with severe pain of bowels, soon after with retching and vomiting, quickly followed by spasm, or as it is called by the patient, "cramps" of the whole body and limbs, excessive sickness, shivering, and cold perspiration, with coldness of the extremities; what was the nature of these first evacuations could not be ascertained, as he had during the night retired from the house when urged by the calls of nature.

He is reported to have continued in this state till some time in the forenoon, when the purging ceased, and an emetic was ignorantly administered, after the operation of which, he is described to have become worse.

At nine P. M. I saw him for the first time, and found him labouring under the following symptoms:—retching, constant vomiting of every thing swallowed, excruciating pain of abdomen, not increased by pressure. Has recently evacuated by the bowels matter reported to have “resembled half-boiled white of egg.” Spasm of the whole body and limbs coming on in paroxysms, of which I witnessed several—sense of intolerable heat over the region of the stomach, urgent thirst, pulse almost imperceptible at the wrists, quite so at the temples, surface of the body cold and clammy, skin of a blueish or leaden hue, features collapsed, eyeballs sunk in their sockets, remarkable lividity of countenance.

Warm brandy and water were ordered to be freely given, and five grains of the *Pil. Thebaicæ*, E. P. every hour while the vomiting and spasms continued. Warm flannels, and bottles with warm water to be applied to the body and extremities, with a sinapism over the stomach.

3d—The patient has had a restless night, yet, upon the whole, there is a perceptible amelioration of the urgent symptoms. The intervals of retching and spasms are longer than yesterday, thirst unabated; but what is swallowed less immediately rejected, pulse quick and more distinct at the wrists, heat of body increased, but requiring constant hot applications to keep it up. Has had no stool to-day. Has taken eight of the pills above ordered, containing in all four grains of opium.

Continue hot gruel with brandy, repeat the sinapism. To have one grain of opium, and three grains of calomel every three hours.

4th—Considerable reaction has taken place, spasms nearly ceased, the stomach has retained a little gruel and

brandy, no evacuation from the bowels, heat of skin more easily sustained, pulse stronger, countenance less ghastly. Owing to the extremely penurious habits of the patient and the absence of all relations or responsible attendants, I find my prescriptions and directions very ill executed.

To have a lavement administered immediately, and repeated at intervals till the bowels are opened, and to continue the brandy gruel.

Eleven o'clock, P.M.—Considerably worse, constant singultus, extremities cold, spasms gone; two lavements have been administered, first was retained two hours, and came off with the second quite unaltered, said to have been mixed with a whitish matter, which having sunk to the bottom, was not observed till it was being thrown out. Had an evacuation from the bowels about an hour afterwards, of a whitish colour, unmixed with fæces.

Continue hot brandy and water. To have two compound opium pills immediately.

5th—Patient is in every respect worse, singultus constant, is reported to have had, since last report, involuntary evacuation by the bowels of a whitish matter. Died at 5 P. M. No urine had been voided for three days before death.

I never, to my knowledge, saw John Murray till called to him on the evening of the 2d, when it was quite impossible to judge what his personal appearance might have been. From the nature of the work which he performed in the sugar-house, I am certain, however, that he must have been a man of very considerable muscular strength, because no other would have been hired or retained in that particular department.

Much has been said and written about this unfortunate man having been at an "Irish Wedding," and all his suf-

ferings and the disease of which he died, have, humanely, been ascribed to his *supposed* excesses on that occasion.* I have taken considerable trouble to obtain the most correct information possible on this subject; and by the most minute inquiries at the master and manager of the sugar-house, and also at his fellow-workmen, I learn that on Monday, 27th June, he was at the marriage of an Irishman, where he got intoxicated. That he was at his work as usual on the morning of Tuesday, 28th, and continued to perform it with all his accustomed ease and alacrity up to seven o'clock on the evening of Friday, 1st of July. Facts which must for ever set aside the fable of the "Irish Wedding."

A week after this patient was buried, I was told that an emetic had been exhibited at one or two on the afternoon of July 2. In the course of the inquiries above alluded to, I have learned that one of his companions had procured, from a druggist, six grains of tartrate of antimony, with a printed direction that "it should be dissolved in half a pint of water, a table-spoonful of this solution to be given every fifteen minutes, till vomiting takes place."

It is averred by those who were present, that only a very

* I wonder it never occurred to those who so busily propagated this and other calumnies, to ask themselves *what right* they had thus to vilify the memory of a poor and virtuous man? or, if they would have dared to do so had he been *rich and powerful* in station and connexion? After Murray's death, I learned that he had been in the practice of denying himself what even the poorest workmen consider necessities of life, not from covetousness, but from the wish to support his father and mother in comfort; that very recently before his illness, he had sent most liberal gifts to a newly married sister, and that at the very moment he refused to himself the comforts and cordials his sinking frame required, he had in the house ten hard-won sovereigns, destined for the same purposes of filial piety and love! Is it no crime to have thrown public contumely and scorn on such a memory?

small portion of it was swallowed, about two o'clock on *the morning* of July 2. But let us, for the sake of argument, allow that the whole was swallowed at one draught, could these six grains of emetic tartar have produced the morbid symptoms which I witnessed when called to him 19 hours after? We all know that this drug reduces the powers of life in a most extraordinary manner, subduing the outrageous mania to the helplessness and docility of infancy, producing in such cases the sleep that had long been absent; and we also know, that in *over doses*, (such as that mentioned by Orfila, when an ounce was swallowed,) it produces symptoms highly analogous to those of Cholera.* A fact not lost sight of by my friend, H. M. (See appendix, No. II.)

I am even ready to allow, that it may, in the present instance, have added to the debility under which the man laboured; but will any one venture to assert, that it produced deadly sickness, retching, cramp, constant inclination to go to stool, and floods of cold perspiration, *five hours before it was swallowed?*

In the presence of Dr. Daun, I, *for the first time*, learned from a medical practitioner here, that he had been called to Murray; had visited him before eight o'clock in the morning of July 2, and had prescribed a dose of castor oil and an anodyne draught, because he "considered it to be a case of abdominal visceral inflammation." But he returned no more to inquire into the progress of the "inflammation," under this very novel prescription.

To plead in his own defence that he absented himself "because another was called in," is quite in vain, since thirteen hours elapsed between the two circumstances. observe by the Russian Reports, given in the Edinburgh

* Some highly esteemed practitioners in India have advocated the use of antimonial emetics in Cholera.

Medical Journal for July 1831, that similar mistakes were made by the Orenburg physicians when Cholera first appeared there; but I do not observe that any of them left the miserable patients, without advice or assistance, to combat alone the fury and the agony of the disease.

CASE SECOND.†

July 6, 1831. ———, ætat. 22. Healthy girl, stout made, dark hair and complexion. Is reported to have complained, during last evening, of slight sickness; and soon after vomited the contents of the stomach. A dose of salts was exhibited, but rejected instantly by the stomach with great violence.

Before twelve o'clock the bowels were evacuated twice or thrice, after which purging entirely ceased, as also did vomiting. She continued to suffer during the night from paroxysms of excruciating pain of bowels; frequent and severe spasms, which began in the extremities, gradually extending to the gastrocnemii muscles, where they were particularly severe, and thence to the thighs and abdominal muscles. Both brandy and whisky toddy were repeatedly administered during the night, but were always rejected by the stomach. Means had also been anxiously used to restore heat of limbs and extremities, which are reported to have been cold and clammy.

At six A. M. I was consulted on this case; and not having it in my power to visit her then, I ordered her six compound opium pills of the Edinburgh pharmacopœia, one to be taken every half hour till urgent symptoms subside.

Nine P. M. Have visited this patient for the first time. Find her complaining of severe pain of bowels, frequent

spasm of gastrocnemii and also of the abdominal muscles ; sense of excessive heat between the scrobiculis cordis and umbilicus ; urgent thirst ; vomits whatever she swallows ; great restlessness, and prostration of strength ; pulse extremely quick, and scarcely perceptible ; respiration hurried ; countenance very anxious ; features sharp ; livid, particularly round the eyes ; hands shrivelled ; nails livid ; limbs cold and clammy.

No appearance of bile in any thing vomited ; no evacuation from bowels since twelve last night ; no urine voided since same period.

Continue every means to promote heat of surface ; hot bottles, hot fomentations, frictions, &c.

Calomel, gr. vi. Gum opii, gr. i. M. Made into a pill, one of these to be taken every hour till urgent symptoms subside.

Ten p. m. Have visited the patient thrice in the course of the day. Found urgent symptoms gradually subside. Reaction began about mid-day, and has steadily advanced. No evacuation from bowels. Had an ounce of castor oil at four p. m. ; to have another immediately, and a lavement in an hour.

7th. Has had during the night two dark-coloured and very fetid dejections, evidently consisting of vitiated bile ; has also voided urine for the first time since twelve last night.

Every symptom subsided ; debility very great.

Convalescence was rapid and satisfactory.

Patient can assign no reason for her illness ; she has not been exposed to damp or cold ; has ate neither fruit nor vegetable of any kind during the present season.

CASE THIRD.†

July 7, 1831. — Boog, ætat. 8, was seized through the night with vomiting, purging, severe pain of abdomen ; cramp of the feet, legs, and arms ; excessive restlessness and anxiety ; face pallid and collapsed, wild expression of eye, coldness of body, spasms of abdominal muscles severe ; pulse quick, hardly perceptible.

Reaction took place in about eight hours.

The child convalesced slowly.

Opium, calomel, and the hot bath were chiefly employed in this case, and succeeded admirably.

No cause could be assigned for this patient's illness ; he lives under the same roof, but not in the same house, with the deceased J. Murray.

CASE FOURTH.

July 8, 1831. William Dallas, a cooper, ætat. 30, was at his usual work, in perfect health, during the whole day. Took tea as usual in the evening. When preparing to get into bed, about eleven p. m., is reported to have been suddenly affected with sickness at stomach, the contents of which were quickly vomited with considerable violence. Retching continued from this time, with vomiting of every thing swallowed, viz. cold water, and one glass of whisky toddy. About half an hour after vomiting, purging began, at first consisting of dark matters, afterwards becoming of a light colour. About four o'clock A. M. was seized with agonizing cramp of the gastrocnemii muscles, which rapidly extended to the whole muscles of the lower extremities,

drawing them into knots, in the calf of the leg into lumps resembling a man's fist in size and hardness; burning pain at stomach; intolerable thirst; skin cold and clammy; great prostration of strength; respiration hurried and oppressed.

In this state he is reported to have continued till the 9th, ten o'clock A. M., when I first saw him. He was at that time retching violently, the stomach instantly rejecting every thing swallowed; severe purging of muddy fluid, which passes involuntarily; agonizing paroxysms of cramp in the lower extremities, greatly aggravated on the occurrence of retching or purging; has vomited no dark-coloured or bitter matter; complains of severe burning pain of stomach, raging thirst impelling him to drink water, vomited so rapidly as scarce to seem to have reached the stomach; expresses great apprehension lest the cramp seize the stomach itself; countenance collapsed; features very sharp; lips livid; limbs and extremities cold, and bathed in a clammy sweat; fingers shrivelled and livid, particularly the nails; pulse hardly perceptible.

Two grains of opium to be taken immediately. Pills of one grain opium and four grains calomel, to be given every hour till urgent symptoms subside. Apply heat in every way to limbs and extremities.

Eleven P. M. Patient much relieved by taking the above as ordered; spasms and purging gone; heat of surface returning; reaction appears completely established; still complains of burning pain at stomach, and inclination to retch; pulse 100; tongue white.

Convalesced very rapidly.

CASE FIFTH.*

July 8, 1831.

Mrs. ——— ætat. 36. Small slender figure, fair complexion, naturally of a very robust constitution, but of late years predisposed to inflammation.

Went to bed, in her usual health, at one o'clock this morning. Awoke at three o'clock, with twinging pain of bowels, resembling that produced by aperient medicine, which soon wore off. Two hours after she was again awoken by the same cause, when it was equally transient. Again awoken at six o'clock, when it was more severe, and farther down in the bowels; it did not again go away. At seven o'clock she felt for the first time a sensation of sickness,—most severe but transient; this was followed by desire to go to stool,—nothing passed from the bowels; but while there a similar fit of sickness occurred, and she vomited, without effect, three mouthfuls of what she described as being very pure fluid blood,* of a bright crimson colour, but which, by the time I saw it, an hour after, was of a dirty buff, or very pale brown colour, and quite ropy. I saw her for the first time at eight o'clock, when I found her suffering from headach, pain of bowels below the umbilicus, general uneasiness, and constant desire to go to stool.

Quite unsuspecting of the real nature of the impending disease, I merely ordered her a large dose of tincture of rhubarb.

Nine o'clock A. M.—Previous to taking the tincture of rhubarb, the patient vomited a considerable quantity of tasteless colourless mucus, in appearance and frothi-

* This probably came from a cicatrice in the throat. The patient had a severe malignant sore throat last May. For the change in the appearance of the blood I do not pretend to account, I can only vouch for the fact.

ness much resembling soap suds. The tincture of rhubarb was, in a very few minutes after being swallowed, violently rejected by the stomach, mixed with a large quantity of the same whitish fluid. Sickness, pain of bowels, headach, and general uneasiness, continue to increase; great restlessness, and sense of oppression at the praecordia; countenance losing its natural expression.

Ten o'clock A. M.—There have been three copious evacuations from the bowels; from the appearance of which evacuations, it is evident, that the bowels must have been, for some days, at least, in a state of perfect torpor. This is confirmed by the patient herself. Sickness and retching are almost constant; vomiting of white mucus and water; great pain of bowels. Countenance much altered; livid and extremely anxious; surface of body chilly, and bathed in a clammy perspiration; pulse weak and *troubled*; tongue slimy; no spasms of either body or limbs.

Eleven o'clock A. M.—There has been another evacuation from the bowels, consisting of a large quantity of watery fluid, rather deep coloured, and much mingled with portions of faeces. Slight spasms in the arms and hands; feet and limbs deadly cold; pulse weak; strength sinking, the voice almost inaudible; retching and vomiting continue; patient mentions, that in the morning, just previous to first vomiting, she felt, in walking across the floor, a violent prickling sensation in the soles of the feet,* extending

* “A remarkable sense of pricking in the extremities is frequently found to preceede the spasms, and even to ooeur independent of them.”—“The sensation which is observed as arising in the feet is too remarkable to be passed over without farther notiee, as something of that kind seems to be of general ooeurrenee. Dr. Burrell, and others, mention pains, sense of numbness, and other uneommon feelings, in various parts of the extremities; and I have witnessed these sensations preceeding the spasms. They appeared to resemble that painful affection produced by pressure on the

up to ankles, "as if I had trod on the points of pins and needles." This sensation has now returned, and rises from the feet, in *shocks*, as it were, over the whole body, face, neck; and arms, particularly affecting the hands. Thirst becoming very urgent, what is drank almost instantly rejected by the stomach.

Twelve o'clock.—The patient in paroxysms of the most frightful spasm, accompanied by severe lancinating pains in the legs and arms. Every thing taken into the stomach is instantly rejected, except opium, which has hitherto been retained. Thirst intolerable, yet the moment fluid is presented to the lips, and the attempt made to swallow, it is thrust from her with a gesture of horror, resembling that produced by hydrophobia.

Body and limbs deadly cold, bathed in clammy perspiration. The surface of the feet and limbs quite insensible to the contact of any surrounding body.* Complains of scorching heat over the region of the stomach, and most excruciating agony of the bowels, which can be felt by the hand drawn into hard knots, about the size of a small fist; which knots disappear under the hand and start up at another place, as if the whole intestines were *heaving* with spasm. Great pain on the top of head and base of skull.

nates in sitting, when the foot is said to be *asleep*."—Orton on the *Epidemic Cholera of India*, pp. 48-50.

* An attendant had thoughtlessly placed a bottle, newly filled with boiling water, in such a situation that it came in immediate contact with the limbs on both sides; on hearing this noticed the patient said, "Do not distress yourself, *there was nothing touching me*." On grasping the feet firmly in my hands, I found she was equally insensible of pressure. An attendant remarked that, "had the same quantity of heat been, for the same length of time, applied to a piece of *stone* or *metal*, of similar dimensions to the patient, it must have been raised to a temperature far exceeding what the hand could safely touch." The same person compared the touch of the limbs to that of a "*cold wet bladder*."

Intolerance of light, and also of sound; respiration extremely oppressed; pulse barely perceptible at wrists or temples. Countenance of a deep reddish purple hue, expressive of terror and desperation. Eyes enlarged, staring, and much bloodshot; strength declining.

One o'clock P. M.—Paroxysms of spasm verging into convulsion; two strong persons are scarcely sufficient to keep the patient in bed; frequent attacks of singultus; severe pain of bowels continues; no evacuation since eleven o'clock. Great oppression in the praecordia. The intervals between the paroxysms of spasm and retching—rarely amounting to ten minutes—occupied by the most intense sickness; or by fits of breathing, with a short loud *gasp*, so rapidly repeated as to defy counting; this is accompanied with violent jaetitation, and followed by the patient sinking down, as if exhausted, when the respirations immediately fall down to ten or twelve, sometimes less, in the minute; and are so noiseless as to be scarcely audible even to a listening ear. At these moments the patient might be mistaken for a corpse. Very little is now thrown from the stomach, though the retching is most violent; pulse gone at temples; tongue quite cold.

Two o'clock P. M.—No amelioration of symptoms; has just vomited about a wine-glassful of a brown fluid (evidently stercoraceous,) of a most offensive smell, but which the patient says had no *bitter* taste. Vomited again, in a few minutes, a portion of the same colourless mucus formerly described, untinged or mixed with any thing. Suffering excessively from the prickling sensation over the face, neck, and arms; cannot bear to be touched, even in the gentlest manner, in these parts, while the whole limbs and extremities are in a state of the most corpse-like insensibility, and chill; nails of hands and toes lilac-coloured; lips

blue; countenance dark, and expressive of extreme terror and anxiety. The whole appearance and gestures indicate a state of anguish and suffering beyond the power of words to describe. The voice is quite extinct at intervals.

Three o'clock P. M.—The patient continues in the same state. About a quarter of an hour since, she suddenly asked for *something to eat*; a piece of bread was given to her, of which she ate a few mouthfuls with great eagerness.* It did not seem materially to affect her in any way, and was, in a few minutes, ejected from the stomach, mixed with mucus. Prostration of strength is very great; pulse nearly imperceptible at wrists; even at the heart the pulsation is very feeble. I have requested my valued friend, Dr. Hill of Greenock, to see the patient as soon as possible.

Four o'clock P. M.—Patient continues in the same state, singultus very frequent, countenance most cadaverous, skin of hands and feet shrivelled, nails blue.

Five o'clock P. M.—Slight symptoms of reaction begin to appear; intervals between paroxysms of spasm and retching are rather longer, varying from ten to fifteen minutes; fewer fits of gasping; has just vomited a small quantity of fluid, tasting of, and tinged by opium. This is the first time I have observed any opium returned by the stomach.

Eight o'clock P. M.—The amelioration of symptoms has been steadily progressive since last report; the interval between the two last paroxysms was thirty-five minutes; the heat of the body begins to extend downwards; the pulse is

* "It is remarkable that patients in this disease occasionally complain of hunger under the existence of the worst symptoms of the latter stages, and ask for food almost immediately before death. Mr. James Orton has noticed a case attended with the usual burning pains at the stomach, frequent pulse, hot skin, and spasms; at the same time, the patient complained of being *very hungry*."—Orton on the *Epidemic Cholera of India*, p. 51.

sensibly stronger and quicker ; oppression of the praecordia and difficulty of respiration greatly diminished ; restlessness much abated.

Half-past nine o'clock P. M.—Since last report reaction has become completely established, and the exhausted sufferer has just now fallen into a sound and most tranquil sleep ; heat of body natural ; the clammy perspiration gone ; pulse stronger, ninety ; countenance has gradually become placid and natural in its appearance.

Eleven o'clock P. M.—The patient slept three quarters of an hour ; on awaking, she expressed herself much refreshed, “ and *quite comfortable* ;” which, to those who had watched her extraordinary sufferings during the last twelve hours, had rather an odd sound ; heat of skin rather more than natural ; pulse 110 ; tongue much loaded ; has had one slight attack of retching since awaking, accompanied by slight spasm ; she has, for the first time since eleven o'clock A. M. voided a small quantity of high-coloured urine, much interspersed with large flakes of firm white mucus ; there has been no evacuation from the bowels since the same hour.—Being precluded, by a most uncommon idiosyncrasy, from the use of calomel in this case, I have been obliged to depend upon opium alone in its treatment throughout the day. Between the hours of half-past nine A. M. and seven P. M. she swallowed and retained fifteen grains of solid opium. It may also be here mentioned, that she is, constitutionally, *extremely susceptible* to the narcotic effects of this drug.

9th. Nine o'clock A. M.—The patient has passed an easy and comfortable night upon the whole, though reduced to the lowest stage of debility. She has had, at intervals, several hours of refreshing sleep ; and has this morning at a

little thin arrow root, the first food she has swallowed since the evening preceding her attack ; complains of great soreness and tenderness to the touch over the whole body and limbs ; heat of body above natural ; excessive perspiration ; pulse stronger, 120 ; tongue much loaded ; no evacuation from the bowels.

Four grains of blue pill, and the same quantity of extract of colocynth, were ordered to be given morning and evening.

Nine P. M.—Has passed a tolerable day ; sleeping occasionally ; copious perspirations of a strikingly cadaverous odour ; no evacuation from bowels. Complains of great oppression below the umbilicus, and in the left hypochondriac region. Pulse 100. Tongue loaded.

A lavement to be administered immediately.

10th. Last night passed very uncomfortably ; no evacuation in consequence of the pills and lavement ; great restlessness and oppression ; severe headach ; ringing in the ears ; twitching and sickening pain in the muscles of the extremities.

At nine P. M.—The patient felt a sudden inclination to go to stool, accompanied with violent straining and spasm of bowels, by which a small quantity of viscid matter, (resembling, in appearance, melted cheese,) was forced from them—this was followed by a long faint, during which spasm of the extremities repeatedly occurred. On her recovering from this, I ordered a glass of Madeira, and in ten minutes an ounce of Epsom salts ; lavements to be repeated till dejections take place.

Since morning there have been copious evacuations from the bowels of morbid bile, mixed at first with streaks of the same whitish matter described last night.

All painful symptoms gone ; pulse eighty-six, soft ; tongue loaded.

An excessive flow of vitiated bile into the bowels continued for several days ; always previous to evacuation producing the same painful symptoms described. On the 16th the fæces assumed a healthy appearance. Convalescence advanced till the 20th, when the catemeniae appeared, and in spite of every precaution became so profuse as to require the exhibition of wine and tonics to support the sinking strength. This ceased on the 25th, but from that time the patient declined in appetite, strength, and spirits. No complaint was perceptible, and the alvine discharges were healthy. On the 2d of August she was again attacked with Cholera, in a less severe and somewhat different manner. There was no purging, no pain of bowels, no spasms of the lower limbs or extremities, no headach or intolerance of light ; but the sight so dim as to occasion frequent complaints by the patient that the room was filled with smoke. It commenced with sickness so sudden and deadly as to knock the patient down, followed by chillness of extremities and incredible debility ; vomiting occasionally a white, tasteless, frothy mucus. In about two hours a portion of animal food, the last thing eaten, (eighteen hours previous) was thrown from the stomach, mixed with mucus and *perfectly* undigested ; the sickness continued other two hours, when an exactly similar portion of food, floating in mucus, was evacuated without pain from the bowels.* A very long faint followed, on which supervened violent tremors ; prickling sensation over the whole body, which seemed to give great torture ; excruciating pain in the ears ; severe spasm in the muscles of arms,

* The bowels had been naturally and very fully evacuated in the morning, a considerable time previous to the commencement of the attack.

hands, neck, and face; burning pain of stomach; thirst; retching; occasional vomiting of mucus, in which no particle of bile could be detected. Pulse gone at wrists and temples; prostration of strength most extraordinary. Attack lasted three hours.

Dr. Daun saw the patient the 3d of August, and by his advice I overlooked the idiosyncrasy above mentioned, and gave four grains of calomel and three grains of antimonial powder, which was repeated in twelve hours, and produced the best effects, bringing away from the bowels an immense discharge of highly vitiated bile. The patient suffered severely from the after effects of the calomel, but I feel persuaded that no other medicine would so well have answered the purpose intended.

She has since convalesced, slowly but progressively. No cause whatever could be assigned for the first attack: owing to recent indisposition from influenza, the patient had not been beyond the precincts of her own house and garden for five weeks. She habitually abstains from fruit and vegetables.

I have drawn out this case with particular minuteness, not only because I consider it a remarkable one, but because I watched it with the greatest attention through all its stages.

CASE SIXTH.†

July 10, 1831. Nancy Kitchen, ætat. 24, worker in a fax mill, stout well-made girl, enjoys good health, was suddenly seized during last night with what she supposed at first to be cramp in the stomach;—this was rapidly followed by deadly sickness, retching, violent vomiting, during which, spasms beginning in the toes and fingers,

rapidly extended over the whole muscles of the body.* In two hours after the first attack, the bowels were evacuated violently. The matters reported to have been dark and very fetid. An hour after this I was consulted and ordered the Comp. Opium pills of the Edin. Pharm., eight grains to be taken every hour.

In other three hours I was informed that she was getting worse. On repairing to the house, I found the unfortunate young woman lying extended upon her back; the limbs stretched out, rigid, very cold and covered with a profuse clammy sweat. The countenance perfectly cadaverous, livid and sharp, the lips blue, eyes half open, glazed, and deep sunk. Pulse gone at wrists and temples. No motion nor apparent respiration to mark that life was still present. In fact, her whole appearance gave to my mind the impression of one who had just expired, after a horrible struggle. I was informed by her friends, that immediately before my entering, this state of collapse had succeeded to a paroxysm of spasm, so violent that it defied their strength to hold her. The body was alternately drawn together like a ball, with the head between the knees, and then rapidly thrown in the opposite direction backwards; the limbs, feet, and hands writhing in every direction. She soon revived to a sense of her sufferings: her voice was hardly audible, but she complained of torturing sense of heat at the pit of the stomach. Involuntary passing of a clear sherry-coloured fluid from the bowels. Every thing swallowed was instantly rejected by the stomach, unaltered in appearance or taste; when the retching subsides singultus takes place; the pulse still imper-

* In the words of the patient, (an Hibernian) "If you please, Sir, there was not in an hour after I was taken, a bit of my body free of cramps, saving my head, and it was as *ill* as it *well* could be."

ceptible; tongue and breath cold; respiration greatly oppressed.

Pill of one grain of opium and four grains calomel, to be repeated every hour till urgent symptoms subside; warm gruel with brandy to be given for drink; and every possible means to be used for restoring heat of body.

Four o'clock P. M. Heat of skin somewhat restored; countenance improved; fits of retching shorter and less frequent; cramp of limbs still severe; burning pain continues; pulse perceptible; very weak and quick. Is on the whole suffering much less; has taken eight of the above pills, none of which could by the most careful inspection be detected as returned with the matters vomited. To have a pill as above every two hours.

Evening. Reaction is complete; spasm and purging gone; fluids still rejected after being retained by the stomach for a few minutes; complains of extreme soreness over the whole body; burning pain of stomach; heat of skin above natural; pulse 120, soft; has had no sleep.

To continue gruel without brandy; to have a pill of one grain of opium, with four of calomel at bed-time; apply sinapism to epigastrium.

July 11. Has had an easy though sleepless night; complains of nothing but excessive prostration of strength; soreness of the body, and slight pain when pressure is applied to the epigastric region; inclined to retch and vomit what is swallowed; thirst gone; heat of skin natural; pulse 90; tongue white; no evacuation from bowels; no urine voided since first attacked.

To have a pill of one grain of opium, with five of calomel immediately; an ounce and half of castor oil in three hours, and afterwards a lavement if required.

Evening. Has had, since the lavement was administered,

three copious fluid dejections, very dark, green, and fetid; has voided urine; had some hours of refreshing sleep since the evacuations; feels much better; pulse 78.

Convalescence went on progressively from this time; the quantity of vitiated and discoloured bile evacuated from the bowels was very great. On the 13th the faeces assumed a healthy appearance, and on the 18th the girl returned to her usual employment.

This patient could in no way account for her own illness; she had not partaken during the present season of fruit, vegetables, or "new potatoes;" had sat up during the night of 2d July with John Murray, (1st Case) and on the 9th washed the sheet which had covered the body between death and interment.

CASE SEVENTH.†

July 10, 1831. — Kitchen, ætat. 9, niece to the foregoing, worker in the same flax mill, was affected nearly about the same time, in a similar but much less severe manner. Purging and vomiting of clear fluids; severe spasms of diaphragm and abdominal muscles; none of limbs or extremities; convalesced rapidly. No cause of illness known; had ate no fruit or vegetables or "new potatoes" during this season.

CASE EIGHTH.†

11th. — Aiken, ætat. 28, weaver in a duck factory attached to the flax mill, was attacked early this morning with deadly sickness; retching; severe pain of abdomen;

spasms of the diaphragm and abdominal muscles ; great prostration of strength ; coldness of body ; profuse cold sweats and frequent tremors.

Reaction took place speedily, and convalescence was rapid.

CASE NINTH.†

July 11, 1831. James M'Lachlan, ætat. 25, labourer in a sugar-house, very stout made, enjoys excellent health, was seized during the course of last night with deadly sickness, vomiting, and purging of dark matters, which speedily changed to colourless fluids, excruciating pain of bowels, spasms, by which the abdominal muscles seemed drawn in till they rested on the spine ; excessive debility—surface of body cold—profuse cold perspirations. Reaction took place in eight hours after first attack—was completely established in twelve. The patient convalesced rapidly, and returned to his work on the 15th.

Had sat with John Murray during the night of the 3d July. Knows of no other cause for his illness. Has not partaken of fruit, vegetables, or “ new potatoes,” during the present season.

CASE TENTH.*

July 13, 1831. Mrs. Fisher, a married woman, ætat. 22. Enjoys good health. Has for some time past maintained herself by working in a garden. This morning at six o'clock she went out to her work in perfect health. In the course of the morning felt repeated, but very tran-

sient attacks of sickness, and frequent calls to stool. At nine o'clock she returned to her own house. From ten o'clock her uneasiness increased rapidly; and at half-past one I was called to her. I found her at that time affected with severe retching, vomiting of every thing swallowed, unaccompanied with any portion of bile, which she mentions was present when vomiting first appeared. Purging of a dark fluid every few minutes—severe spasms of the abdominal muscles, by which they are drawn into large knots or balls. Similar affections of the muscles of both extremities. The body is at times twisted and contorted in a most frightful manner. Body and limbs icy cold, and covered with profuse cold perspiration. Face blue; features very sharp and collapsed. Eyes glazed, sunk in the sockets. Feet and hands much shrivelled, and of a livid blue colour. Pulse gone at the wrists. Respiration so low as to be almost imperceptible. Voice scarcely audible. Tongue white, and quite cold. Incessant thirst; the fluid drank scarce has time to reach the stomach when it is rejected, unchanged in colour or taste. Complains of agonizing pain of bowels, sense of scorching heat in the epigastric and left iliac regions, increased by pressure on these parts. Intolerable anxiety and restlessness. Great prostration of strength. Has voided no urine since the retching and spasms began.

Can in no way account for her illness. Has not partaken of vegetables, fruit, or “new potatoes,” during the present season. Got wet while at work some days ago; was not sensible of any bad effect at the time.

July 13. Six o'clock P. M. Have visited this patient every hour since two o'clock. She has been severely affected during that time with the spasms, as above described. Purging of a greyish fluid, quite free from any fœtor, and vomiting

of every thing swallowed, except the pills; extreme restlessness and anxiety.

Slight reaction appears now to have taken place. Heat of body is partially restored; pulse perceptible; spasms less severe. Still complains of severe burning pain between the umbilicus and ensiform cartilage, and in the left iliac region. Fluids swallowed are still rejected by the stomach, but not so instantly.

Has since two o'clock taken eight grains of opium and thirty-two of calomel, without inducing sleep, or altering the alvine evacuations, which have for the last hour consisted merely of part of the gruel swallowed, unaltered in appearance or smell. Pill, with one grain of opium and four of calomel, to be continued every hour.

Eleven o'clock p. m. Find the patient in every respect better. Reaction completely established. Complains of soreness over the whole body, burning pain at pit of stomach, and occasional rejection of fluid swallowed. Heat of body much increased; pulse 120; feeble. Has taken three grains of opium and twelve of calomel since eight o'clock.

Sinapism to be applied to the pained part of epigastrium. An ounce of castor oil to be taken in the morning.

July 14. Has had no sleep during the night, but is in every respect much improved. Complains only of burning pain at pit of stomach, excessive weakness, and soreness over the whole body, especially those parts which were most affected with cramp. Has had two copious fluid dejections, very dark-coloured, and intolerably fetid.

Heat of skin natural; pulse 90; weak. Retching ceased at day-break. Tongue white.

Apply twelve leeches to the pained part.

July 15. Has had about an hour of very refreshing

sleep this morning. Has voided small quantity of urine. Had a slight attack of cramp in the legs and arms this morning. Complains of severe pain of abdomen, increased by pressure. Pulse 76; full. Heat of skin natural. Face flushed. Tongue white.

One grain of opium and four of calomel to be given immediately. Apply twelve leeches to the pained part of the abdomen.

July 16. Has slept some hours, and feels much refreshed. Pain of abdomen quite gone. Has had several fluid dejections, greenish coloured, very fetid. Pulse 74; feeble. Heat of skin natural. Tongue whitish.

July 17. Has had a sleepless night, yet is in every respect much improved. Alvine evacuations of a natural colour and fœtor. Pulse 74; good. Tongue clean.

The patient convalesce rather slowly; the bowels requiring constant attention. She finally made a good recovery.

CASE ELEVENTH.†

July 15. ——— a young lady, ætat. 21. Enjoys good health. Slender figure, dark hair and complexion. Went to bed last night at eleven o'clock, in her usual health. Awoke at four this morning, complaining of sickness at stomach, and inclination to vomit. Retched violently, but ejected nothing from the stomach. She had at this time a fluid evacuation from the bowels, of a perfectly natural appearance. On returning to bed she speedily fell asleep, and remained so for two hours, when she again awoke, extremely sick at stomach. Retching supervened,

with violent ejection from the stomach of a clear, tasteless, watery fluid. Purging of a fluid similar in its appearance, and quite free from fœtor, occurred at intervals. These symptoms continued unabated till nine o'clock, when a little brandy was given to the patient, which the stomach instantly rejected. The retching and purging became more frequent. At ten o'clock she was affected with tremors, accompanied by a peculiar tingling sensation over the whole body. At this time the debility became so great, as to create alarm in her friends, and I was called.

Eleven o'clock, A. M. I have just visited the patient, and find her exactly as reported above. Vomiting of clear tasteless fluid frequent; nothing swallowed remains above a second on the stomach; matters purged are clear and free from fœtor; pain of abdomen; cramp of the lower extremities; surface of body cold, bedewed with a clammy perspiration; skin livid; features collapsed; eyeballs sunk; tongue slimy; pulse scarcely can be felt at the wrist, gone from the temples; great prostration of strength; voice feeble; no urine voided since four o'clock; can assign no cause for her present illness; has not been exposed to cold or damp; nor partaken of fruit, vegetables, or "new potatoes."

Same means that have already been used for restoring heat of surface, to be continued, with stimulating frictions. Gave two grains of opium; and ordered one grain to be given every hour till symptoms subside.

Nine P. M. Have seen this patient thrice in the course of the day; urgent symptoms began to subside after six of the opium pills had been taken. Reaction advanced in a satisfactory manner. The case was treated in the same manner with most of the foregoing, and after copious bili-

ous dejections, convalescence took place, but the patient continued to feel great debility for eight or ten days.

CASE TWELFTH.†

July 16, 1831. Mrs. —, ætat. 38, a married woman, worker in a flax mill, has always enjoyed good health; was attacked during the night with symptoms exactly similar to those detailed in Case eleven. This case was early attended and easily subdued. Convalescence was rapid. She resumed her usual occupation on the 20th. Could assign no cause for her illness. Had ate neither fruit nor vegetables

CASE THIRTEENTH.†

July 17, 1831. Mary Hunter, ætat. 16½, worker in a flax mill; tall of her age, stout made, has hitherto enjoyed good health, went to bed at eleven o'clock in perfect health. Suddenly awoke at two o'clock this morning with a sensation of deadly sickness, which in ten or fifteen minutes was followed by vomiting and purging, so excessively violent, that the matters ejected from both stomach and bowels were thrown with great force to some considerable distance.

The first evacuation from the stomach is reported by the patient to have been of a bitter taste; and the first stools to have been dark-coloured and very fetid. These were quickly followed by a tingling or prickling sensation over the whole body, and cramp of the fingers and toes,

which successively extended to the muscles of the legs, thighs, and arms; at length the whole muscles of the body became to such a degree affected with spasm, that it was twisted and distorted in every direction. These paroxysms were accompanied with most agonizing pain of abdomen, which did not altogether intermit with them. Had urgent thirst, but no sooner swallowed any fluid than it was rejected by the stomach, mixed with phlegm, but unchanged in colour or taste.

Surface of body reported to be cold and clammy. Face livid and eyes much sunk. Occasional delirium.

I was first consulted on this case between seven and eight A. M., when I ordered opium to be freely given till the vomiting, purging and spasms cease.

Eleven o'clock A. M. Patient in a state of extreme restlessness, tossing from side to side of the bed; moaning and complaining in a feeble voice; seems impatient of the very bed-clothes laying upon her; tears and pushes at them constantly. When the paroxysms of spasm are present, it requires the strength of several persons to hold her in bed; and the whole body is contorted in such a manner as to terrify those around her. The abdominal muscles feel quite hard, like a plank; giving to the touch the impression that they are resting on the spine. This the patient describes by saying that she "feels as if tightly tied down with a rope." About three hours ago she requested her parents to take her out of bed and place her in another. While in the act of conveying her there, an attack of spasm came on. The body was violently drawn backwards, and became quite stiff; all power of voluntary motion was suspended,—so as to give the impression to those who were present that death had actually taken place. In this state she continued for several minutes.

Every thing taken into the stomach is rejected except the opium, not the smallest portion of which can be detected on examination of the matters vomited. The retching is less severe since nine o'clock. Purging, of a clear slimy fluid, continues; respiration suspirious; complains of severe pain in the chest. Sense of painful scorching in the region of the stomach violently increased during the paroxysms of spasm in the extremities; and also by pressure applied to the part. When the retching is absent she is severely afflicted by singultus.

Surface of body cold, covered with a profuse clammy sweat. Countenance expressive of great suffering and anxiety; features collapsed and sharp; lips livid; a remarkable dark ring round the eyes, which, however, are now less sunk than in the morning. Pulse 100, feeble as usual, but more distinct; from these two last circumstances there seems reason to hope that reaction is commencing.

Warm frictions and other applications to be constantly used until heat of body is restored. Small quantities of warm gruel for drink, and a pill, containing six grains of calomel and one grain of opium, to be given each of the following four hours.

Three o'clock P. M. Retching less severe, of shorter duration and occurring at longer intervals. Fluid swallowed still vomited, but longer retained at a time; still complains of scorching pain of stomach. Singultus nearly constant. Heat of surface greatly restored. Pulse 110, soft and rather full. Countenance less anxious—upon the whole much improved since last report.

Evening. Has taken thirty grains of calomel and nine of opium in the course of the day. Reaction is now completely established. Complains of burning pain at pit of stomach, soreness over the whole body. Thirst still con-

inues, and occasional retching. Had a greenish coloured very fetid dejection this evening. Pulse quick. Tongue white. Singultus troublesome.

On the 18th and 19th there were large evacuations from the bowels of vitiated bile; but convalescence went on in a satisfactory manner.

The girl had attained her usual state of health, when on the 10th of August she experienced a similar attack, but less severe than the above.

It was subdued by similar means. Can assign no cause for either. Has not partaken of fruit, vegetables or "new potatoes" during the present season. Had sat with Nancy Kitchen (Case sixth) for some time on the afternoon of 10th July.

CASE FOURTEENTH.†

July 17, 1831. Mrs. —, a married woman, ætat. 36. Went to bed in perfect health, awoke at four A. M. with deadly sickness, and other symptoms of this malady. Though milder, this case bore a strong resemblance to case fourth.

Reaction took place rapidly, and convalescence was satisfactory. Was able to move through the house on the 21st, though very weak.

CASE FIFTEENTH.

July 17, 1831. J. M. ætat. 12, a well-made stout boy, attending school. Was suddenly attacked, about three o'clock this morning, with deadly sickness, urgent retching,

vomiting, purging, severe pain of abdomen, burning pain of stomach, cramp of the extremities, excessive restlessness and anxiety, succeeded by coldness of body, cold sweats, collapse and lividity of face, wildness of expression in eyes. Pulse quick, hardly perceptible. Matters vomited and purged, clear colourless fluids; those from the stomach, after the first, quite tasteless; severe spasms of abdominal muscles, great prostration of strength.

Reaction took place in about twelve hours. And the patient convalesced very rapidly. Being a fine spirited lad, I found him on the 21st out amusing himself.

CASE SIXTEENTH.†

July 17, 1831. Mary Whiteford, ætat. 13. A slender-made, but healthy girl. Went to bed at ten o'clock last night in her usual health. Is reported to have become extremely restless towards midnight; continued very uneasy, constantly tossing from side to side, and throwing down the bed-clothes, till five this morning, when she suddenly vomited a large quantity of a yellowish fluid, and slightly streaked with green. Drank a glass of water, which was instantly vomited pure and colourless. Fainted immediately after vomiting. Purging supervened. The matters first evacuated from the bowels, after the natural contents, are described by her mother as consisting of a perfectly white froth, quite inodorous, and subsequently of a yellowish starchy fluid, of a most peculiar fætor; in neither could the smallest portion of feculent matter be detected. Deadly sickness continued, vomiting of every thing swallowed, frequent and severe fits of retching, uniformly followed by fainting, limbs and extremities cold, livid, bathed in clam-

my sweat. Burning pain of stomach extending over abdomen.

I saw her for the first time soon after nine A. M. and found her exactly as described above.

The pulse scarcely perceptible at wrists, countenance very anxious, features sharp, lividity, particularly of the lips, and round the eyes, which were sunk in the sockets. Hands wet and shrivelled, nails blue; great debility from first attack.

This Case was subdued with great difficulty by the use of large doses of opium and calomel, and also of ammonia frequently repeated, large sinapisms, and the application of external heat in every possible way.

Convalescence was slow and unsatisfactory. Chronic diarrhoea supervened, which is now (August 9th) gradually subsiding under the use of antacids.

CASE SEVENTEENTH.

July 17, 1831. — — — ætat. 16. Healthy, well-grown young man, clerk in a sugar-house.* Went to bed in perfect health; awoke this morning with a sense of deadly sickness and oppression at the præcordia, to which supervened vomiting, purging, spasm of abdominal muscles, and burning pain in the epigastric region. Incessant thirst, excruciating pain of bowels; collapsed features, lividity and anxiety of countenance, great prostration of strength, pulse weak and fluttering, tongue white, extremities cold and clammy.

After the natural contents of the stomach and bowels were evacuated, nothing passed from either but a watery fluid, in which no portion of bile or feculae could be de-

* The same where Murray and McLachlan were employed.

tected. There was a total suppression of urine till after reaction took place.

This case yielded slowly and with considerable difficulty to the usual treatment.

Owing to an injudicious exertion made by the patient, convalescence was for some time slow and unsatisfactory. He ultimately recovered completely.

Could assign no cause for his illness. Had neither cat fruit, "new potatoes," or any thing unusual.

CASE EIGHTEENTH.†

July 18, 1831. Sarah M'Arthur, ætat. 21. Works in a flax-mill. Stout made girl; has from infancy enjoyed uninterrupted good health. Was suddenly seized with purging about four o'clock, P. M. This continued frequent, dejections watery and dark-coloured. At six P. M. retching and vomiting of a clear fluid came on, followed by great chillness of the extremities, prostration of strength, thirst, burning pain at the scrobiculus cordis, very severe spasms of the abdominal muscles, &c. This case yielded easily to the usual remedies, and convalesced rapidly.

Knows of no cause for her illness, lives in the same house and sleeps in the same bed with Mary Hunter. (Case 13.)

CASE NINETEENTH.

July 19, 1831. — Dickson, ætat. 28. Weaver in duck factory, attached to flax-mills. Was perfectly well up to six o'clock this morning, when he was suddenly affected with overpowering sickness and debility, followed

after some time by purging and vomiting. The whole case bore a strong resemblance to the one above, though rather more severe, and like it yielded readily to the usual treatment, recovered rapidly.

CASE TWENTIETH.

July 19, 1831. Mrs. Millar, ætat. 38. A Case in all respects similar to Nos. 18 and 19. Convalesced slowly, owing to previous bad health.

CASE TWENTY-FIRST.

July 20th.—A young gentleman, ætat. 16, has from infancy enjoyed the most uninterrupted good health. At four o'clock, A. M. I was called to him; when he informed me that he went to bed in his usual health at half-past ten o'clock last night, and was suddenly awoke at one this morning with a most overwhelming sense of sickness and oppression at the præcordia. Within an hour after, the stomach and bowels were evacuated of their natural contents. The matters from the stomach are reported to have been at first bitter and greenish. What came from the bowels could not be ascertained. Spasms commenced in the toes and gradually extended to the abdominal muscles, which drew him together as if by a cord. Such was his own description.

I last evening saw and conversed with this youth, as I have been in the habit of doing for the last two years; a picture of the most perfect health and buoyancy of spirit. Had it not been from his conversation, and in his father's

house, I could not this morning have recognised him, so much was he altered, shrunk, shrivelled, and discoloured.

I found him complaining of great weakness, and oppression at the præcordia, excruciating pain of abdomen, and severe burning pain in the epigastric and left illiac regions, retching, vomiting of every fluid taken into the stomach; purging accompanied with severe paroxysms of spasm in the lower extremities and abdominal muscles, which are drawn inwards as if resting upon the spine; countenance much altered, collapsed, sharp, and livid, particularly under the eyes; lips and cheeks blue; eye-balls sunken in their sockets, and hence a peculiar wild stare; extremities cold; clammy and livid at the toes and fingers; pulse scarcely perceptible at wrist, quick and fluttering; tongue white, thirst urgent, requesting cold drink, which is instantly rejected, tinged with green matter; the paroxysm of retching and vomiting is generally preceded by tremors and spasms in the extremities. These paroxysms are most distressing to witness.

One grain of opium to be given immediately; half an hour afterwards one grain of opium and four grains of calomel, to be given every hour till the vomiting, spasm, purging, and other urgent symptoms subside; apply warm frictions to the body, and use other means of restoring heat.

Eleven A. M. I left this patient at six o'clock, and have just seen him again; urgent symptoms are much mitigated; burning pain of epigastrium is much complained of, especially when pressure is applied on taking a full inspiration. The fluid swallowed is immediately rejected quite unaltered in taste or colour, mixed with a quantity of clear mucus. Dejections fluid and watery, without smell, and passed involuntarily; pulse more perceptible, countenance less an-

xious. Has taken twenty-five grains of calomel and seven of opium in the form of pill since first visited.

To have four grains of calomel and one of opium every hour, and a sinapism applied to the scrobiculus cordis immediately.

Two o'clock. Has had repeated paroxysms of retching, vomiting of a clear matter; purging of watery fluid involuntary, not fetid, but now feels much easier. Felt much relief from the sinapism; reaction has taken place. Heat increased; face flushed, pulse 126, full and soft; has taken three of the pills prescribed.

To discontinue the medicines and to have some gruel.

Six o'clock. Continues free from all urgent symptoms; has had some sleep, pulse 100, soft; heat of skin natural, surface moist and soft.

Eleven o'clock P. M. Has had ten hours sleep; vomited the gruel; no evacuation from the bowels since two o'clock; pulse 100 and soft, skin moist and white.

To have a pill containing one grain of opium and six of calomel.

21st. Has had a good night; slept a little; was ordered ʒi ss. of sulph. magnesia this morning, and a lavement ten hours afterwards, which have produced the fluid dark fetid evacuations. Has voided urine for the first time since attack commenced.

22d. Better in every respect; had an ounce of castor oil, which produced two fluid dark stools.

23d. Had pain of epigastrium; twenty-six leeches were applied, which gave relief. The patient made a good recovery. Knew of no cause likely to have produced his illness. Had not partaken of new potatoes or any thing unusual. Rode out on the 19th, which he is in the daily

habit of doing; got a slight shower, was not over-heated at the time, or sensible of any after-chill.

CASE TWENTY-SECOND.

July 20th. ———, sister of the foregoing, ætat. 14, in all the bloom of high health, was attacked this morning soon after four o'clock, while I was with her brother, and in a manner exactly similar.

After the stomach and bowels had evacuated their natural contents; the dejections consisted of a fluid resembling water in which long kept flesh-meat had been steeped; the odour was most peculiar. From the stomach the matters ejected were a clear mucus fluid without taste or colour.

This, and case thirteenth were the only ones in which I observed the intellectual faculties in the slightest degree affected by this malady. Mild delirium was present at intervals; at one of these times the patient having risen from bed, was knocked down on the floor quite rigid with spasm. A detail of the case would form but a repetition of the one above. Reaction took place in eight hours, and convalescence was rapid and satisfactory.

No cause could be assigned for her illness.

CASE TWENTY-THIRD.

July 20th. Captain ———, ætat 40, about thirty-six hours from sea, went last night to bed in perfect health. During the early part of this morning was suddenly seized with cramp in the toes, gradually extending to the muscles of the limbs, abdomen, and arms, which were in various

places drawn into hard knots as balls. There supervened vomiting and purging; excruciating pain of bowels; sense of scorching heat over the epigastrium; urgent thirst, and great debility. Reaction succeeded very rapidly, and the recovery was good.

Could assign no cause whatever for his illness.

CASE TWENTY-FOURTH.†

2d August, 1831. Jessie Gillespie, ætat. 17. Maid-servant in a gentleman's family in this neighbourhood, of a slender make, went to bed in her usual health, at ten o'clock last night; awoke at 3 o'clock this morning complaining of sickness and pain of bowels, quickly followed by retching and vomiting; the first matter vomited is mentioned by the patient to have consisted of bread which she had eaten before going to bed, and free from any bitter taste; nothing has since been ejected from the stomach but quantities of a perfectly tasteless and colourless fluid. The bowels were immediately evacuated of their natural contents, after the first attack of sickness; since which the matters purged are reported to be clear like water. Has had frequent attacks of cramp in the limbs; she became unable to assist herself or even attract attention to her sufferings till the usual hour of rising, when the lady of the house observed her moans. I was immediately sent for, but, through the inadvertence of the messenger, did not receive intimation till ten o'clock.

Half-past 10 o'clock A. M. I have just seen the patient for the first time; complains of sickness, retching, and vomiting of every thing taken into the stomach, which has consisted of cold water only, which intolerable thirst compels her to drink. Every individual draught is not in-

stantly rejected, as frequently happens in other cases ; but when three or four have been taken in succession, then the whole is vomited.

The patient has just had an evacuation from the bowels, which I have examined ; it consists of matter resembling white of egg, or thin starch, swimming in the serum. As one of her fellow-servants remarked, it was “ like half-curdled milk swimming in whey,”—it is entirely free from fœtor.

Surface of the body cold and clammy, features sharp and collapsed, countenance of a dark or livid colour, particularly around the eyes ; eyeballs sunk in their sockets ; pulse quick, and hardly perceptible at the wrists ; respiration hurried ; thirst urgent, and constantly calling for cold water. Complains of cramp in the legs and arms ; pain of bowels gone ; has passed no urine since morning.

To have a grain of opium immediately, and repeated every hour, with five grains of calomel in the form of a pill.

12 o'clock. I have sent for Dr. Hill to examine this case, and have written to Dr. Daun at Glasgow, describing the case exactly as above.

Half-past 2 P. M. Visited the patient along with Dr. Hill. Considerable amelioration of the symptoms ; heat of skin returning ; countenance less anxious, and of a more natural appearance ; vomiting of every thing taken into the stomach continues except the pills, as they cannot by the most minute examination of the fluid ejected from the stomach be detected. Cramp returns at intervals. Has had another evacuation from the bowels of the same starch-like matter, free from fœtor. Pulse 132, numbered by Dr. Hill ; tongue white, thirst urgent. In consequence of the patient complaining of cramp, I gave one grain of opium.

10 P. M. Reaction is completely established, and the patient acknowledges herself much better, although the sickness and vomiting of the fluid swallowed continue, with some abatement. Complains of the taste of laudanum in what she last vomited, arising, of course, from the dissolved opium. Heat of skin more than natural, but covered with a gentle and agreeable moisture; face flushed. Pulse 120, tongue white, thirst urgent, stools still of the same starch-like appearance.

No bile can be detected in any of the evacuations; voided no urine. Has taken ten grains of calomel and two of opium since last report, previous to which she had taken twenty-five grains of calomel and six grains of opium.

To have another pill.

3d August. Has had a little sleep during the night, and feels somewhat refreshed this morning; sickness at stomach continues, but less severe. The fluid swallowed is still rejected, after remaining a few minutes: thirst less urgent, countenance placid, inclination to sleep. Had an evacuation from the bowels last night at 12 o'clock, which has been shewn me; it is dark, bilious, and remarkably foetid; has voided no urine. Pulse 90, soft, and rather weak; heat of skin natural, tongue cleaner than last night; cramp gone.

To have another pill, and to have five grains of calomel in two hours.

4 o'clock P. M. Continues easier, attacks of retching less frequent, face flushed, heat of skin rather increased. Pulse 90. Has had some refreshing sleep, and voided about half a pound of dark-coloured urine, with flakes of mucus swimming in it. She is in every respect better and more comfortable. Has retained the pill, but is supposed by the attendants to have vomited the calomel.

10 o'clock P. M. I learn that Dr. Daun visited the patient about two hours ago. Has had about an hour's

sleep; feels free from every complaint except slight attacks of sickness at stomach, and occasional vomiting of the fluids swallowed, which have chiefly consisted, from the commencement of her illness, of cold water, toast and water, gruel, barley water, and latterly rice water. Pulse 94, small and rather weak. Tongue moist, and of a more natural appearance; heat of skin natural; no evacuation from the bowels, although she has taken five grains of the *Pil. Colo. Comp.* and five of the *Pil. Rhei. Comp.* since last report. Has voided a small quantity of urine, which is clear, and of more natural appearance.

To have a pill as formerly.

4th morning. Has had some sleep during the night, but does not feel refreshed; still retching and vomiting the fluid swallowed; heat of skin natural, pulse 90, tongue white; no evacuation from the bowels.

A blister to be applied over the stomach, and lavements administered every two hours.

Half-past nine P. M. Three enemas have been administered, and she has had two fluid evacuations from the bowels, dark and very fetid. No retching since morning,—the blister was not applied,—voided urine three times, which is of a natural colour, only complains of weakness and slight attack of sickness,—heat of skin natural,—pulse 72, and soft,—tongue more natural.

Grema and pill to be repeated.

5th. Has had a good night's rest, and feels in every respect greatly better to-day,—irritation at stomach gone; two lavements have been administered, and has had three dark-coloured and fetid stools; heat of body natural, pulse 72, tongue moist and clean.

To have some colocynth pills.

Considered convalescent.

Since the foregoing cases occurred and the report of them prepared for press, a few fresh cases have come under my observation, similar, however, in symptoms which accompanied, and the results which followed the treatment of them, with the exception of one, a man sixty-three years of age, to whom I was called twenty hours after the commencement of the attack. In this case slight reaction took place, which was however followed by stupor, and the man died in a few days under symptoms of cerebral congestion.

I feel happy in being enabled to give the two following cases, the former transmitted to me by Dr. Hill of Greenock, the latter by Mr. John Torbet of Paisley, who have very kindly permitted me to publish them.

August 4, 1831. Con. Byrne, æt. 25. Of a spare habit of body, for the last five years; has been constantly employed in Messrs. Fairrie's sugar-house, where, from his regular steady conduct, he has some place of trust. Went to bed perfectly well, having had his usual supper of porridge and milk at 9 o'clock: after some hours of sleep, awoke feeling pains in the right shoulder, and stitches in the side, attended with sickness and oppression in the epigastric region; these symptoms continued till about one o'clock in the morning, when vomiting and purging came on, which were said to be incessant, with hardly an interval of five minutes. At first he went out of the house to stool with nothing but his shirt on, which caused such coldness and shivering, that his teeth chattered, when he got some warm gin and water, and was put to bed.

I saw him about six A. M. as his friends thought him dying, and found him very pale, making allowance for the blanched look his occupation creates,—features shrunk, hands and feet cold, surface of the body moist, pulse 120,

tongue clean but florid; thirst urgent, yet rejects every thing taken in the shape of drink. Eyes slightly suffused, bowels very empty, the muscles of the abdomen may be said to rest on the vertebræ; no pain from pressure on any part of the belly. The stools were carried out as soon as voided, but there is not the least smell or appearance of feces on the bed-clothes, about 3ij. of bilious matter, with a slight greenish tinge, was kept for my inspection; had two smart fits of cramp in the calf of each leg a little before I arrived. While I was in the room he got very quickly out of bed, and passed by stool some whitish stuff, which I likened to white bread beat up in water with a tinge of blood in it; it had not the slightest smell, which I desired the attendants to remark, and ordered it to be kept. Just as he got into bed had an attack of spasm in the left hand, affecting chiefly his fingers.

I gave him two pills containing two grains of opium and the same of calomel in each. Laudanum and brandy were rubbed on the belly, round which was wrapped a flannel shirt; a mustard poultice was applied to the epigastric region, and a large jar of hot water placed at his feet, while he was desired to rest his hands on a bottle of hot water. Retaining the pills, I gave ten grains of calomel. He got some brandy-toddy, and was ordered to get a table-spoonful of it occasionally, and to take a pill every hour, should the vomiting or purging continue; to take toast and water, or water-gruel, for drink, cautioning his sister to give very little of either, for as soon as he distended the stomach he would bring on the vomiting.

11 A. M. Vomited very shortly after I left him in the morning, and continues to vomit frequently; took only two of the pills which I left for him, but did not retain them many minutes; thirst urgent, yet vomits as soon as he drinks;

sinapism had little effect ; skin slightly red ; features still more collapsed ; eyes sunk, and appears very languid ; has had no purging since he got the first dose of opium and calomel. The following particulars were noticed by my colleague, Dr. Mackie, who visited the patient along with me,—“ Complains of pain in the right side, yet it does not impede respiration ; pressure over the part does not cause pain ; pulse 130, tongue clean and moist, surface cool. The fluid vomited is slightly yellow ; the matter purged has a smell of serum. The bile which I saw at my first visit has now assumed a deep verdigris green colour.

Applicet. Emplast. Vesicat dext. hypochon. injicitur enema domest. donec alvus solut. fuerit, as the pills are not easily taken. R. Pulv. Opii. gr. ii. Capsici ann. gr. i. p. Submur. Hydr. gr. ii. M. F. P. sumat. 1 omni hora donec vomitio cessat. Toast and water, ginger beer, peppermint water, to which add half a tea-spoonful of the aromatic sp. of Hartshorn ; continue the brandy-toddy.

Four P. M. Vomits constantly, so that nothing has been retained. The injections were voided almost as soon as administered, without procuring a stool. The blister has not begun to act,—pulse 120,—skin cool, though drops of perspiration are on the forehead from the violence of the retching. The assistant was ordered to continue the enemata, using tepid-water or soap-suds, administering them as slowly and cautiously as possible till they answered ; if these failed, to try the effect of a tea-spoonful of laudanum in a little starch.

Nine P. M. Vomiting incessant,—great thirst,—what he vomits has a yellow tinge, but at present it is whitish. Features collapsed,—eyes very sunk and inflamed,—passed two stools such as first described, still void of smell,—got three

opiate enemata, each of which he retained for about a quarter of an hour. Has used a good many effervescing powders, which he thinks quench the thirst and cool the burning in his breast.

Habeat. Q. P. submur. hydr. \mathfrak{z} i.

taking water for drink.

August 5th, 6 A. M. Vomited the calomel shortly after taking it, passed a restless night, thirst great, stomach very irritable, retches up still dark-green bile, nothing has come from the rectum since last report, pulse 120, tongue furred, with florid margin, face bedewed with a cold perspiration, hands and arms cold, but his feet keep warm.

Habeat. Q. P. Submur. Hydr. \mathfrak{z} i, vomited it immediately ; injiciat. Enema Amyli et adde. Tinct. Opii \mathfrak{z} i ; appl. Ungt. Hyd. Visicat.

9 A. M. Vomiting continues, eyes considerably inflamed, yet his aspect is improved; complains of pain in the muscles of the neck and chest, from the continued retching and vomiting; retained the opiate cnema; voided for the first time from two to three ounces of high-coloured urine, which on cooling deposits some blood; appears worn out, and falls into very short slumbers.

Injiciatur Enema Terebinth ; applic. Vesicat. Gastro.

Contin. Pulv. Opii, et alia.

12 Noon. The turpentine and castor oil injection was retained for some minutes, but brought away no fæces ; has passed about \mathfrak{z} ii of bloody urine at three different times, and has not vomited since the exhibition of the Turpentine. Complains of itching all over his body ; and on examination there are a few papulae on the chest and belly ; has retained some ginger beer, and slept for an hour at a time ; took almost a tea-cupful of chicken soup ; expresses his thankfulness for the relief he has got ;

felt some threatening to vomit, which went off in getting rid of flatus per anum. Pulse 100, skin moist, tongue furred, features improved, left him asleep. Blister on the stomach, removed before it vesicated.

9 P. M. Slept the greater part of the day ; itching of the skin still troublesome, particularly of the nostrils, which are very red from constant rubbing ; has taken a good deal of the chicken soup ; vomited three times, and has still an inclination to retch. No stool ; while asleep perspired profusely, voided with difficulty about $\frac{3}{4}$ of bloody urine ; complains much of flatulence ; pulse 120 ; tongue white, red edges ; skin cool.

Rept. S. Mur. Hydr. $\mathfrak{d}\text{i}$; Injiciat. enema terebinthin. infus. tamarind. pro potu.

6th August, 7 A. M. Passed six ounces of a whitish fluid after the injection last night, vomited four times a quantity of greenish bile ; sighed frequently while asleep ; drank some small beer, and used one or two effervescent powders ; pulse 120, face flushed, tongue cleaner, perspires freely ; passed at two different times a small quantity of bloody mucus, such as you see in dysentery. 2 P. M. Both Dr. Mackie and I are afraid of intersusceptio. Nothing like a feculent stool has been passed from the first, vomits as soon as he drinks. On a careful examination of the belly we find that pressure on the left lumbar region gives pain, and that he is sensible of pain in that part on making a deep inspiration. Pulse 116, very compressible ; tongue slightly coated ; heat intense. Itching of the skin abated ; perspires much ; face flushed when asleep. Urine pale, free of blood.

Appli. herudin. xx. parti dolenti ; eapiat. Q. P. submur. hydr. $\mathfrak{d}\text{i}$.

5 P. M. Ten leeches only sat, but by the application of hot poultices a good deal of blood was abstracted ; vomited the ca-

lomel, but had two thin brown-coloured fæculent motions, after the rectum had been repeatedly distended with tepid water; countenance eadaverous; complains of weakness; pressure or a deep inspiration does not give pain in the lumbar region. Pulse 130, tongue furred. Itching of skin nearly gone; surface cool and moist; much inclined to sleep. From this time he rapidly improved, and was able to sit up in bed the third day.

Paisley, August 5th, 1831.

M. H. æt. 12. Was yesterday attacked with purging. She continued running about the whole day, ate her supper, and went to bed as usual, without complaint. In the middle of the night was attacked with vomiting, slight spasms of the inferior extremities, and pain of belly, purging followed, and with the vomiting has continued with little intermission till now. 11 A. M. when my brother visited her, her present symptoms are pain of belly, aggravated on pressure, especially in the left iliac region; vomiting incessant; dejections frequent, these sanguinolent. Complains of a sense of burning heat; tongue slightly furred and parched; great thirst; surface, especially of extremities, cold; pulse almost imperceptible; extremely restless, cannot lie with the bedclothes; she is continually ridding herself of them.

Apply external heat and additional bedclothes;

Habeat statim, calomel gr. viij. gum opii, gr. i.

2 P. M. Vomited the powder, but has kept the pill; thirst excessive; drinks frequently, but vomits the fluid as soon as swallowed; heat of surface much the same; pulse imperceptible at wrist; sensation of burning heat continues; has had more spasms; no stool.

Calomel gr. vi. ft. talcs quatuor statim sum.

4 P. M. I visited her along with my brother. Vomiting

and thirst unabated ; has again ejected the calomel ; surface almost quite cold ; pulse so imperceptible as to render it impossible to number it. Still complains of burning heat, and pain in the belly ; countenance pale, eyes sunk, expression very anxious ; tongue a little furred, but clammy ; breathing suspirious ; great restlessness. I told my brother that I considered the case one of Cholera, with symptoms of great congestion, such as is detailed by Annesley, and that if we could get blood from the arm that it would relieve the girl at once. A vein was accordingly opened ; and after much labour about two ounces of dark tar-coloured blood trickled or rather dropped down the arm. No more could be obtained. Frictions all over the body with flannel and strong volatile linniment. A little warm toddy was exhibited, but it was instantly vomited unchanged.

7 P. M. No amendment, though friction has been anxiously persevered in ; the external heat and pulse same as at last report ; spasms occasional but slight ; thirst and vomiting continue. The matter vomited nearly colourless. While a warm bath was preparing, I had occasion to witness the girl's sufferings. They did not seem to arise from pain, but from excessive oppression about the chest ; her breathing was a succession of sighs, and she perpetually called on her mother to help her. She was impressed (as indeed we all were) with the idea that she was dying ; and often wished that she was dead. Her tossing was incessant ; so was her thirst, and she vomited whatever she drank ; her countenance was pale and anxious. I got a large tub of water, as hot as my hand could bear it, and threw in a quantity of salt ; I got her into it as soon as she could bear its heat ; she complained most grievously of the heat, and it was almost by force I got her to continue sitting in it. I got a large jug and poured jugfuls of the water over her shoulders and

breast. She sighed very deeply. I added hot water, and kept her in the bath covered with a blanket as long as she could sit. She seemed at length to get so faint that I had her taken out, rubbed very dry, covered with warm flannels, and laid into bed. A little warm toddy exhibited, which however she did not retain. Continues quite clear and collected in her intellect.

Ten P. M. After the bath fell asleep. At present a gentle moisture over the surface; pulse at the wrist can be numbered; it is considerably above a hundred, and weak; vomiting continues, but only when any thing is drank; complains less of heat.

Capiat statim calomel gr. xx. Gum opii, gr. i. ss. In the morning a grain of opium if the symptoms are not relieved.

6th, Eight A. M. Vomiting less urgent than yesterday; passed the greater part of the night in slumber, accompanied with deep suspirious breathing; retained the first pill and the calomel, and had the second pill at one A. M. One scanty stool of a greenish white colour; pain of belly still considerable, and augmented by pressure; tongue furred; thirst continues; pulse 110; of better strength; was bled to the amount of six oz.; blood still of a darker colour than usual, but flowed more freely.

Habeat statim enema domesticum, et post horam magnes. sulphatis $\bar{3}$ i.

Seven P. M. Has had two copious feculent stools of a greenish colour; vomits less; pain of belly less; she lies in a drowsy inactive state, from which, however, she is easily roused. Respiration still suspirious; pulse as before; blood cupped and buffy.

Habeat hora somni pilulam ex calomel gr. vi. gum opii gr. 1. M.

7th. Had a quiet sleep; respiration still suspirious; the same drowsy state continues; pain of belly less; vomiting less; thirst still considerable; complains of pain over forehead; tongue foul; pulse again oppressed and hardly perceptible; she was again bled to $\bar{3}$ vi.

Habt. statim magnes. sulph. $\bar{3}$ i.

Evening. Continues much in the same state; rather less drowsy; headach less; one stool of a similar appearance to former. Pulse still small; blood taken in morning, buffy. She was again bled to $\bar{3}$ vi.

8th. Was faint after last bleeding; the surface getting cold, hot bottles were applied, and a little warm toddy given, which she no longer vomits. Pulse 100, soft and calm; headach gone; pain of belly gone; no vomiting, and purged once freely.

I need not trouble you with any further detail of this case; ptyalism took place, and she continued in a very unsatisfactory state for some days, but gradually recovered.

It may perhaps be interesting to the general reader to compare the foregoing cases with the following striking description, copied from Mr. Seott's "Report of the Epidemic Cholera of India." Madras, 1824.

"The invasion of Cholera generally takes place in the night, or towards morning. The patient is sick at stomach; he vomits its contents, and the bowels are at the same time evacuated. This evacuation is of a nature quite peculiar to the disease; the entire intestinal tube seems to be at once emptied of its fæcal or solid matters; and an indescribable but most subduing feeling of exhaustion, sinking, and emptiness is produced. Faintness supervenes, the skin becomes

cold, and there is frequently giddiness and ringing in the ears ; the powers of locomotion are generally soon arrested, spasmodic contractions, or twitching of the muscles of the fingers and toes are felt, and these affections gradually extend along the limbs to the trunk of the body. They partake both of the clonic and the tonic form, but the clonic spasm chiefly prevails. The pulse, from the first, is small, weak, and accelerated, and, after a certain interval, but especially on the accession of spasms, or of severe vomiting, it sinks suddenly so as to be speedily lost in all the external parts. The skin, which from the commencement of the disease is below the natural temperature, becomes colder and colder. It is very rarely dry ; generally covered with a profuse cold sweat, or with a clammy moisture. In Europeans, it often partially assumes a livid hue ; the whole surface appears collapsed, the lips become blue, the nails present a similar tint, and the skin of the feet and hands becomes much corrugated, and exhibits a sodden appearance. In this state, the skin is insensible even to the action of chemical agents, yet the patient generally complains of oppressive heat on the surface, and wishes to throw off the bed-clothes. The eyes sunk in their orbits, which are surrounded by a livid circle ; the cornea becomes flaccid, the conjunctiva is frequently suffused with blood ; the features of face collapse ; and the whole countenance assumes a cadaverous aspect, strikingly characteristic of the disease. There is almost always urgent thirst, and desire for cold drinks, although the mouth be not usually parched. The tongue is moist, whitish, and cold. A distressing sense of pain and burning heat at the epigastrium are common. Little or no urine, bile, or saliva is secreted. The voice becomes hollow, feeble, and unnatural. The respiration is oppressed, gene-

rally slow, and the breath is deficient in heat.".....
 "During all this mortal struggle
 and commotion in the body, the mind remains clear, and its
 functions undisturbed almost to the last moment of exist-
 ence. The patient, though sunk and overwhelmed, listless,
 averse to speak, and impatient of disturbance, still retains
 the power of thinking, and of expressing his thoughts, as
 long as his organs are obedient to his will. Such is the
 most ordinary course of Cholera Asphyxia, when its tenden-
 cy to death is not slackened by art.

"A favourable issue is denoted by the rising of the pulse,
 a return of heat to the surface, inclination to sleep, and a
 diminution or sensation of vomiting, purging, and spasm;
 these indications being succeeded, after an interval, by the
 reappearance of fæcal matter in the stools, of bile, of urine,
 and of saliva.

CONCLUDING OBSERVATIONS.

I AM well aware that there are some who will pronounce the opinion with which I closed the preliminary observations, as far too bold and sweeping. In common with the rest of my civilian brethren who have never practised in India, I should feel much obliged to such persons if they would inform us on what diagnostic of the Indian disease we can depend, which is not to be found in some one, if not all, of the foregoing cases. Is it the burning pain between the scrobiculis cordis and umbilicus, which at page 38 of Mr. Annesley's work on the diseases of India, (justly considered the text-book of all Indian practitioners,) he asserts to be the constant, and even *invariable* pathognomonic symptom ; "and which," he adds, "I therefore consider as *particularly characteristic* of the Epidemic Cholera ?" There is only one of the foregoing cases in which it will not be found most conspicuously.

Is it the appearance of the discharges from the

alimentary canal? A more concise and exact description of this symptom, as it appears in the foregoing cases, cannot be given, than in the following quotation from Mr. Scott's "Report of the Epidemic Cholera of India."—Madras 1824. "After the first discharges by vomiting and purging, however severe these symptoms may be, the matter evacuated is always watery, and, in a great proportion of cases, it is colourless and inodorous, and often homogeneous. In some it is turbid, resembling muddy water,—in others it is of a yellowish or greenish hue; a very common appearance is that which has been emphatically called the "congee (rice-water) stool," an appearance produced by mucus flakes floating in the watery or serous part of the evacuation. The discharges from the stomach do not appear to differ from those of the bowels, except in the former being mixed with *inegesta*." Let the reader compare this with my cases.

Is it the peculiar state of collapse to which the circulating power is reduced by the very first attack of the disease? I consider this, and the equally peculiar state of the skin and countenance, as two of the least variable symptoms I met with.

Is this boasted diagnostic to be found in the suppression of urine? I did not meet with a single case where this symptom was not present; and, in most, it continued for hours after reaction was es-

tablished, when a small quantity of dark-coloured turbid urine was voided.

Some authors remark as a diagnostic of the Indian form of the disease, that its invasion almost uniformly takes place through the night, or early in the morning. In how many of the foregoing cases will it be found to have taken place at any other period?

As I never saw any case in which I considered it advisable to use the lancet, I cannot judge what was the state of the blood, further than it appeared when abstracted by leeches, which were freely used, and from which it proved exactly as described by Indian authors, black and ropy.

As spasm is no new feature in the Cholera of this country, it need not be farther adverted to here.

These assertions do not rest on any single and unsupported testimony. No Indian ocean divides the cases from the severest scrutiny, either here or in those places from which I have procured similar reports.

I have been cavilled at for not more frequently calling in the aid of some of my medical brethren in these cases. It is very easy to be wise *behind*, instead of *before* events. Could I have foreseen the ungentlemanlike attacks that have been made upon me, no doubt self-interest would have dictated such a precaution ; but as I could not do so, and never felt any difficulty in deciding on the nature of the disease, or the treatment it required, it never did

occur to me, except on one occasion, to bring any of my friends from a distance of three miles, to see cases differing in no respect from those which I knew these gentlemen to be treating at the very same time. No such fault can be alleged in case 24.

In my treatment of these cases, I followed so exactly the footsteps of others, that its success can reflect no credit on me as an individual. To attempt, from experience, so very limited as mine, to add any thing to the great mass of knowledge already before the public on this subject,—would argue more presumption than wisdom—but I may here mention the very marked advantage, and relief to the patient, which uniformly followed the application of a bandage, as tight as it could be borne, round the body, from the waist downwards. I generally used a stripe of stout flannel two or three yards long, and of a suitable breadth ; and I have heard, from every patient with whom it was tried, the declaration of the comfort and support it gave them. It would require more extended experience for me to assert positively that it always allays the vomiting, purging, and agonizing pain of the bowels ; but in one case where these symptoms had subsided on its application, they immediately reappeared on its being removed by the impatience of the sufferer, and again relieved when by my orders it was replaced.

There was no remedial measure which I so earnestly desired to put in force, none which I found

it so impossible to procure, as the vapour bath. It has since occurred to me, that the portable vapour bath, which can be so rapidly put in operation, and applied with so little fatigue or annoyance to the patient,—will be found a valuable auxiliary to other treatment, during the stage of collapse. I endeavoured to supply the want of it by the use of fomentations,* which, though liable to many objections, answered the purpose tolerably well. It struck me as a very remarkable feature of this disease, that it seemed to disarm of their usual effect the two weapons principally employed to combat its violence. I did not, in any one instance, observe a narcotic effect to follow the opium—neither did ptyalism take place on employing calomel. In three cases only, there was for a day or two very slight tenderness of the gums. I always used these two drugs combined in the form of pill, and I had occasion to observe, with great surprise, how very rarely these were ejected from the stomach, even when vomiting was most urgent,†—but when calomel was used in powder, I rarely found it retained.

* It may be useful to the general reader to be told the manner of applying these. A large square of thick woollen cloth, to which a strong loop is attached at two sides, is soaked in boiling water. A hooked, or cross stick, is passed through each of the loops, and by turning the sticks the cloth is tightly wrung, without endangering the hands of the attendant. It is then to be wrapt round the limbs and extremities of the patient, with a dry blanket above and below, removed when cooling, and *instantly* replaced by another prepared in the same manner. Previous friction of the skin, with any stimulating embrocation, will assist in restoring the circulation.

† Mr. Orton makes the same remark.

Dr. Daun several times remarked to me that, in his opinion, the local situation of Port-Glasgow was such, as to render it probably liable to frequent visitations of Cholera. This opinion is not borne out by fact; neither can I see that it is so by analogy. Port-Glasgow is built with a width and regularity of streets uncommon in towns of its date and size; it is airy, standing on a small promontory on the Clyde, commanding on the east, west, and north views which yield to none in Scotland, either as to cheerfulness or magnificence; to the south it is flanked by a range of low hills, laid out for some miles on each side of the town in gardens and orchards; in many places these hills are cultivated to the very summit. On an average with the larger towns in its neighbourhood, it enjoys a greater exemption than they do from epidemic diseases of every kind. Since I settled here (in 1816,) I have never, except in the years 1825 and 1826, met with any cases of Cholera at all resembling those just detailed. In each of these years there appeared from three to four cases of unusual severity occurring at intervals of several weeks.

In 1825, one proved fatal; the mate of a North American trading vessel, who, while in perfect health, attending to his accustomed work on board ship, was suddenly struck down by sickness and oppression so deadly, that he required to be assisted home: I was called to him an hour after, when I found him writhing with the most violent

spasms in every limb ; but more particularly in the left arm. And at the same time in a state of such complete collapse as bade defiance to all remedial measures.

I remained with him for nearly an hour, vainly trying for his relief every means my utmost skill could suggest. I was obliged to visit other patients, and on returning to his house in about an hour, I found he had just expired ! The stools, in this case, were inodorous, and perfectly resembled starch, or “ half-boiled white of egg.” The case altogether made an impression on my mind, which never can be obliterated : on mentioning the particulars of it to my late much valued and venerable friend, Dr. Carmichael, of this place, he told me, that, during sixty-four years’ practice here, he never had met with any thing at all similar, but that it bore a very striking resemblance to Cholera Morbus, as he had seen that disease in India. “ But,” he added, “ I always observed it in India to be accompanied with copious black vomiting.”* It is very remarkable that this observation of my aged, but most intelligent friend, exactly coincides with the account given by the earlier writers who have described the Cholera

* Dr. Carmichael was in India in the years 1757, 8, and 9, and settled here in 1761. Although irrelevant to the subject under consideration, I hope I shall be pardoned for mentioning here that this excellent practitioner and amiable man, was the first in this country after Cheyne, who ventured upon, and succeeded in, amputating the humerus at the shoulder-joint. The case is altogether a very curious one, and appears in vol. 5, page 79, of the Medical Commentaries.

of India ; while this symptom appears rarely if ever to have been exhibited by the disease in its late epidemic form. In 1826, one case also proved fatal, more from age, and a debilitated constitution in the patient, than violence in the disease, which, in fact, appeared with no very unusual symptom. From that period up to the present year, I have never seen a single case of Cholera ; and since, for sixty-four years previous to 1825, the town and neighbourhood had enjoyed a similar exemption from its presence, I think we are warranted to conclude that the charge against its local situation is unjust. The part of the town where it first appeared on the late occasion, and to which, as seen by the marks affixed to the cases, it continued principally confined, is that commonly called Newark ; it consists of a single row of houses along the line of the Glasgow road ; open to the river in front ; and at the back of which are situated the flax-mill, and close to it the sugar-house of Messrs. Brown and Company. My own house, and also that in which cases 21 and 22 occurred, are about half a mile distant from this, and quite out of the town.

The disease appeared in my own family exactly seven days after my first visit to John Murray.

It has been a general, and hitherto an undisputed remark, that Cholera in this country has its origin in the too free use of fruit, unripe or otherwise, and also of crude vegetable matter ; and we find it commonly appear about the middle of August, and prevail till the latter end of September.

In the present year it appeared six weeks earlier, and in no one case, which I met with, had green vegetables been an article of diet at all. In only three cases had fruit been recently used, and in these cases it was in very small quantity.

For some time previous to its appearance, and up to the present moment, there has unremittingly prevailed here, the bowel-complaint and diarrhœa common to the season, accompanied with gastric and enteritic irritations more than usually severe ; and a general complaint of languor and want of appetite. I do not recollect any season since I settled here, (15 years ago,) during which I met with so many cases of bilious fever,* jaundice, and other hepatic derangements.

Much unnecessary blame has been attached to me, in consequence of the false assertion, of my having stated to government, that this disease had been “ imported here by a ship from Riga,” or St. Petersburg ; which ship, let it be observed, did not arrive here till after July 20th. *Previous* to that date, the whole of the foregoing cases, except five, had occurred ! I most certainly would not have been justified in concealing from the Board of Health what were the particular occupations and circumstances of the persons whose cases I was called on to report to it. I did this—and nothing more. In the words which I use the liberty of

* There were at one and the same time in my own family, two inmates labouring under Cholera, and one under a most severe bilious fever.

quoting from a letter, recently addressed to me, by a highly distinguished individual, connected with the Board, I “ did” my “ duty in laying before the Board of Health such instances as occurred to” me, “ and left the Board to determine what they were to apprehend, or whether they were to apprehend any thing from such appearances of disease ;” and had I not been attacked in the wanton manner I have, by those from whom I had least reason to expect it,—these pages never would have appeared before the public.

A P P E N D I X.

No. I.

PORT GLASGOW, *6th July*, 1831.

DR. MARSHALL TO LORD MELBOURNE.

MY LORD,

In compliance with the requisition made in his Majesty's proclamation of the 20th ult. that all medical practitioners do send to your Lordship reports of whatever cases of Cholera occur in their practice, I have to communicate the following:—

John Murray, *aetat.* 25, a healthy and very temperate living man, left his work in his usual health, at six o'clock on the evening of the first instant; early in the night was seized with vomiting and purging. I was first called to see him on the evening of the second, when I found him labouring under the characteristic symptoms of spasmodic Cholera, *viz.* vomiting, purging of matter resembling white of egg, severe pain of the bowels, accompanied by cramps or spasm of the body and limbs; pulse almost imperceptible at both wrists; surface of the body cold, and of a bluish, or leaden hue; features collaps-

ed, and the eyeballs sunk in their sockets. Intellectual faculties quite entire.

From the first, I considered this case as likely to prove fatal; on the 4th instant the patient rallied a little, and there seemed to be a remission of the worst symptoms. In a few hours, however, he again sunk, and expired in convulsions on the afternoon of the 5th.

I have not for some years met with a more distinctly marked case of spasmodic Cholera. The most minute inquiries have hitherto failed to elicit any cause to which it could be ascribed. Though much inclined to doubt the contagious nature of Cholera in ordinary circumstances, I think it right to state, that I was to-day called to another case in the same quarter of the town, milder however, and less likely to terminate fatally, from having been immediately attended to on the first appearance of the symptoms.

I have the honour to be,

My Lord,

Your Lordship's humble servant,

JOHN MARSHALL.

*To the Right Hon. Lord Melbourne,
Downing Street, London.*

SIR HENRY HALFORD TO DR. MARSHALL.

SIR,

I am desired by the Privy Council to write to you in consequence of your letter to the Secretary of State for the Home Department; to acknowledge your attention, and to request you to send immediately any further information upon a subject so interesting to the government and the country, if any new circumstances should arise, in connexion with the case of John Murray, or if fresh instances should occur to your ob-

servation of a similar disease. Should any other instance present itself, on receiving information of the fact from you, the Privy Council will direct a medical gentleman who is acquainted with Indian Cholera, to repair to Port-Glasgow, for the purpose of supplying their Lordships with further information.

I have the honour to be, Sir,

Very much your faithful servant,

HENRY HALFORD.

President of the Board of Health.

College of Physicians,

July 12th, 1831.

P. S.—May I ask you, whether you have been in India, or have seen any cases of Cholera out of this country?

H. HALFORD.

— From this time I continued to report cases of the disease as they occurred, up to the 21st July. On the 25th, I received the following letter:—

C. GREVILLE, ESQ. TO DR. MARSHALL.

COUNCIL OFFICE, WHITEHALL,

July 23, 1831.

SIR,

Your letter of the 19th July, addressed to Sir Henry Halford, has been transmitted to me for the information of the Lords of the Council, and I am directed by their Lordships to express their satisfaction at the details you have been at the trouble of communicating to the Board of Health. And to acquaint you, that in consequence of the increase of the disorder at Port-Glasgow, their Lordships have thought fit to despatch a medical gentleman to that place, for the purpose of examining

to the cases which have occurred, and reporting upon them to this Board. I have no doubt, that in prosecuting that inquiry, as well as in every other particular, that gentleman will receive every possible assistance from you, and he will be desired to communicate with you, upon his arrival at Port-Glasgow.

I am, Sir,
Your obedient servant,
C. GREVILLE.

DR. MARSHALL TO C. GREVILLE, ESQ.

PORT GLASGOW, *25th July*, 1831.

SIR,

I am this moment honoured with yours of the 23d instant, and I am most happy to inform their Lordships, that no new cases of Cholera have occurred in my practice, since the 20th. The preceding day, the weather, which for some weeks had been unusually sultry and dry, changed to light showers, with a strong breeze from the N. W. On the 20th, 21st, and 22d, the rain fell in torrents. The weather still continues damp and chilly.

It is a source of great satisfaction to me, that the Lords of the Council have directed a medical officer to investigate the cases I have reported; and it shall be my utmost endeavour to afford him every assistance in my power for that purpose.

I am, Sir,
Your obedient servant,
JOHN MARSHALL.

APPENDIX.

No. II.

GLASGOW, *Aug. 1.*

TO THE EDITOR OF THE GLASGOW HERALD.

MR. EDITOR,

I HAVE seen a statement in the London Morning Chronicle of this day, from which it appears that fears are entertained that the true Indian, or, if you please, Russian Cholera, has arrived at Port-Glasgow, on board a ship laden with flax from Riga. There is no foundation for an assumption of this kind. The whole business may be explained in a few words:—About the beginning of this month, several people were attacked with symptoms of Cholera, similar to what occur annually about the beginning of autumn. These persons were chiefly patients of Dr. Marshall, Port-Glasgow; one man is said to have died of the disease. It ought, however, to be stated, that the deceased man, a native of West-Britain, went to an Irish wedding, and there got beastly, I should rather say, royally drunk; and eventually, was seized with sickness, and an affection of the bowels. Some of the bystanders believed that the man was only “spewin’ fou;” others said he had got Cholera, and it seems the latter opinion prevailed. He was ordered a solution of the tartrate of antimony, of which he partook freely, and he died. Dr. Marshall reported to the Board of Health, that the long expected Cholera had arrived, and discovered that I had been a passenger in some of the flax ships from Riga. Dr. Daun, formerly surgeon to the 89th regiment in India was, in consequence, appointed by the Board of Health to investigate the business. He arrived in Glasgow from London on Tuesday, and instantly proceeded to Port-Glasgow, on Wednesday, (yesterday); he was joined by Dr. Badenach, surgeon to the forces, who had received instructions on the subject from Sir William Pym, Superintendent-General of Quarantine. The result of this investigation is, that in the opinion of Doctors Daun and Badenach, who had both seen much of the disease in India, no case resembling Indian Cholera had as yet appeared at Port-Glasgow.

Thursday, July 28th, 1831.

H. M.

DR. MARSHALL TO THE EDITOR OF THE GLASGOW HERALD.

Port-Glasgow, Aug. 1, 1831.

SIR,

I have this moment seen an article in the Herald, of this date, signed "H. M." and dated "Thursday, 28th July," which contains misstatements and misrepresentations so gross, that I must request that you will immediately furnish me with the name of the author.

I am, Sir,

Yours, &c. &c.

JOHN MARSHALL.

DR. MARSHALL TO THE SAME.

Port-Glasgow, Aug. 2, 1831.

SIR,

Having received no answer to my letter of yesterday, I have again to request that you will give up to me the name of the person who furnished you with the paragraph signed "H. M." in yesterday's Herald; otherwise, I shall be under the painful necessity of holding you answerable for the misstatements it contains, and liable to any steps that may arise therefrom.

I am, Sir,

Yours, &c. &c.

JOHN MARSHALL.

EDITOR OF THE GLASGOW HERALD TO DR. MARSHALL.

*Herald Office, Glasgow,
August 4, 1831.*

SIR,

On returning last night from a short excursion into the country, I found your two letters, requiring the name of the writer of an article on Cholera Morbus, which appeared in last Monday's Herald. The author of the notice in question is Dr. Henry Marshall—Deputy-Inspector of Hospitals—who told me this forenoon, that he had drawn it up at the request of Doctors Daun and Badenach, who were much teased with questions from all quarters, and who thought it their duty to tranquillize the public mind as soon as possible.

I am, Sir,

Yours, &c. &c.

SAMUEL HUNTER.

EDINBURGH:

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